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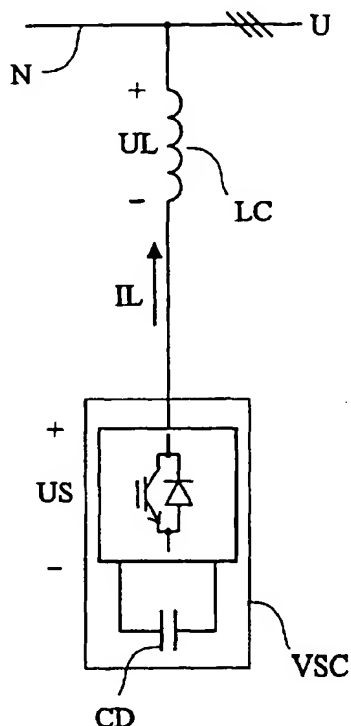
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(54) Title: EQUIPMENT AND METHOD FOR EXCHANGING POWER, IN SHUNT CONNECTION, WITH AN ELECTRIC POWER NETWORK, AND USE OF SUCH EQUIPMENT



(57) Abstract: Equipment for exchanging power, in shunt connection, with an electric power network (N) comprising a reactive impedance element (C, LC) and a voltage source converter (VSC) for mutual connection in series. The power network has a nominal voltage (U_n) of a fundamental frequency (f) and a given phase position. The converter is intended for generating a fundamental-tone voltage (U_S) within a control range (A) which limits the amplitude of the fundamental-tone voltage. The control range limits the amplitude of the fundamental-tone voltage to a value which is lower than the nominal voltage of the power network and comprises generation of a reactive component (U_{Sr}) of the fundamental-tone voltage with a phase position (ϕ) that either coincides with the phase position for the voltage of the power network, or that deviates by 180° electrically from the phase position for the voltage of the power network.

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